

CONSUMERS'

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ON GUARD FOR CONSUMERS

CONSUMERS'

Issued every two weeks by the
CONSUMERS' COUNSEL DIVISION
Agricultural Adjustment Administration

D. E. MONTGOMERY, Director
MARY TAYLOR, Editor

Address all inquiries to
Editor, CONSUMERS' GUIDE
U. S. Department of Agriculture
Washington, D. C.

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Two kid shoe manufacturers, a representative of the kid leather industry, and a public official formerly connected with the leather industry have been writing us letters about the article on shoes published in the September 20 issue of the CONSUMERS' GUIDE.

What we said about kid shoes has disturbed them. They question our statements of fact. They suggest an anti-kid bias in our reporting. They ask us to correct "misinformation which is damaging to an important industry."

Directly by letter to each of these correspondents, and now indirectly to other kid shoe manufacturers, we are eager to meet this challenge of our facts and our objectivity in reporting them. To set the record straight, we give here the essential parts of the most specific of the four critical inquiries received:

"In the CONSUMERS' GUIDE of September 20, 1937 (Vol. 14, No. 13), under the heading of 'Your Money's Worth in Shoes,' there appeared a most misleading and unfair portrayal and account on this subject, particularly as applying to kid. The account could not be more biased and apparent if it were written by those tanners competing with the tanners of kid.

"We cite just a few of the deceptive features:

"Page 4—Photograph with descrip-

tion: 'Calfskin shoes give good general service for city street wear.' With another photograph underneath reading: 'Sheepskin (kid) in bargain shoes has stretch, loses shape quickly, scuffs easily.'

"A more damaging reference and insinuation could hardly be conceived than to imply that kid was bargain shoes, particularly when there were no pictures truly showing shoes made of what is properly known as kid.

"Page 5 (fourth paragraph, first column). The paragraph stating that most suede footwear is made of calf, ignoring completely the fact that millions of feet of kid suede is sold each season to shoe manufacturers, with perfect satisfaction and wear to the consumers.

"(Last paragraph, second column.) The statement that genuine kid leather is not used for shoes is absolutely incorrect, as millions of kidskins are used by the various tanners.

"The subsequent sentences are delusive and, on the whole, the article has the earmarks of propaganda for calfskin and other leather competitive to kid.

"It hardly seems proper that a Government agency should be used as a vehicle to disseminate misinformation which is damaging to an important industry.

"We do not believe that any agency of the Department of Agriculture intentionally was a party knowingly to this harmful propaganda. We are disposed to think that the article was the result of lack of proper information rather than competitive inspiration.

"Nevertheless, we feel that steps should be taken to correct any harm that may have been done by the appearance of this erroneous information."

To this we have replied:

"First," our letter reads, "I want to thank you for your very frank

challenge of this piece, and to assure you that we have every desire, in giving useful buying information to consumers, to be fair and impartial in our treatment of the products of competing industries.

"Your suggestion that the article in question 'has the earmarks of propaganda for calfskin and other leather competitive to kid' has greatly surprised us, because nothing could have been farther from our intention. Indeed, if you will reexamine the text you will notice that in our reference to calfskin shoes we simply stated: 'Its flexibility makes it a desirable choice for general service,' while in our reference to kid-skin shoes we said: 'Kid shoes, often the first choice for street wear and for dancing. . . . These skins finish well in many different colors, are soft, pliable, and porous—characteristics prized in a summer shoe.'

"May I take up each point that you raise in your letter? First you draw attention to the caption appearing under one of the photographs but do not reproduce that caption exactly as it appeared in print. As printed, it reads: 'Sheepskin ("kid") in bargain shoes is stretchy, loses shape quickly, scuffs easily.' The use of the quotes and the parentheses was for the very purpose of emphasizing the fact that sheepskin and kid are not synonymous, although some sheepskin shoes may be sold as kid. It is difficult for me to understand how anyone could infer from this caption that we were saying that 'kid was bargain shoes.' On the contrary, the text states very clearly that 'Best grades of kid leather are expensive.' On the basis of good authority, we went on to point out that sometimes consumers are offered bargain 'kid' shoes which are not 'kid' but sheepskin. Certainly there is nothing derogatory to kid in such a statement.

"Our omission of a picture of kid

[Concluded on page 18]

CONSUMERS' GUIDE

ON GUARD FOR CONSUMERS

Olives from Spain, like all foods imported from other countries, must measure up to the regulations of our food and drug laws. Fifteen percent of the time of the food and drug force last year was occupied in the control of import traffic.



ON APRIL 13, 1937, the United States attorney for the District of Massachusetts, acting upon a report by the Secretary of Agriculture, filed in the district court a libel praying seizure and condemnation of 44 cartons of raisins at Pittsfield, Mass., alleging that they had been shipped in interstate commerce on or about March 20, 1937.

"On May 10, 1937, no claimant having appeared, a decree of forfeiture was entered and it was ordered that the product be destroyed."

Behind this technical language of the court is the story of the Food and Drug Administration at work.

In an eastern city, someone became ill from eating raisins. The case was reported. Food and Drug men got on the job. They analyzed raisins taken from the same box as those which had caused the illness,

Headline news from the 1937 report of the chief of the Food and Drug Administration

and also raisins from an unopened box bearing the same identification marks and purchased at the same time. The fruit in each box had an alarmingly high hydrocyanic acid content.

Job number one was to find out where these raisins came from; second, to what places they had been shipped in the country; third, to remove all products which contained the poisonous toxic acid from the market; and fourth, if possible, to remove all possibilities of this type of "accident" happening again.

Food and Drug men traced the fruit from the eastern source across country to the port of San Francisco, and discovered that these particular

boxes of raisins were a part of a large shipment of dried fruit that had been tied up on the docks during a maritime strike. When released, as a precaution against insect infestation, the entire shipment had been treated with hydrocyanic acid, and had remained in contact with it for varying periods. As a health measure, hydrocyanic acid is often used as a fumigant on incoming vessels. It is also effective in destroying insect infestation. Federal agents tracked down all shipments of this fumigated fruit, examined some 850 samples of it, and seized approximately 280,000 pounds of raisins.

Then came the follow-up work. Officials visited individual packing

houses and drying yards to investigate their fumigating practices. Fifteen out of one hundred and four concerns admitted using hydrocyanic acid on fruit which was held in storage before shipping. The Food and Drug Administration has always maintained that "the use of a highly toxic fumigant on foods is always hazardous because of the possibility of human carelessness and the many unexplored possibilities of retention of the gas by the food under some conditions." As the result of the investigation, the use of hydrocyanic acid as a fumigant has been discontinued by the dry-fruit packing industry.

This raisin story is only one of the high spots of the work which engaged the Food and Drug Administration in the past year. We have space here for only a brief survey of a few of their activities. For a more comprehensive review, read the "Report of the Chief of the Food and Drug Administration, 1937." (Superintendent of Documents, Washington, D. C. Price, 5 cents.)

Last year when the dreaded word "FLOOD!" flashed over the wires and the radio, the Food and Drug immediately organized to meet the emergency situation. Angry torrents, carrying away homes and possessions, leave in their wake desolation, ruined crops, and possible epidemics due to contaminated food. During the disastrous Ohio Valley floods, the Food and Drug Administration assigned 44 men to the distressed districts. Eighty men from State and city food-inspection organizations and from other Federal agencies made up the emergency force to see that food which had been damaged by flood waters did not reach consumers. Thousands of pounds of perishable commodities were ordered destroyed. Other products, including some grains, were allowed to be denatured and sold for animal feed. Canned food hermetically sealed had



Old utensils are giving way to new in the maple sirup industry. Following discovery last year of lead in maple products, Food and Drug officials warned maple producers of the dangers of using buckets and other equipment painted with lead paint.

to be reconditioned before it could be sold. It is estimated that this emergency staff handled enough food and drugs to maintain a city of 200,000 population for a year.

Not as dramatic as the work during the flood, but fully as important for the welfare of the Nation, is the everyday routine inspection of food and drugs which are shipped in interstate trade or are imported from other countries. The major effort in the past year, as in the preceding years, was directed toward the control of food and drug adulterations which have a direct effect on public health. Thousands of samples of food and drugs were examined—many seizures were made. However, there was a slight decrease in the total number of criminal prosecutions as well as seizures.

Food contaminated with lead, arsenic, or fluorine has long been the concern of the Food and Drug Administration. Examination of fruits and vegetables for excessive spray

residue is one of its regular activities. Every year, the Administration has found it necessary to seize thousands of pounds of these products. However, due to the campaign waged against these menaces to public health, both by the Federal Government and State agencies, the spray-residue situation has materially improved. There were fewer seizures of fruits and vegetables because of lead, arsenic, and fluorine contamination this year than last year. That's cheering news but there is still need for constant vigilance. There is always the danger that through carelessness, ignorance, or unscrupulousness on the part of an isolated producer unwholesome food will reach consumers. The report points out that though celery, cabbage, peppers, and cauliflower, which have formerly given considerable concern because of spray residue, were in general free from objection; however, one shipment of cabbage which was seized in Washington, D. C., contained a per-



This cat is patiently waiting to see if a commercial flea cure will rid him of fleas. Insect sprays are tested by the Food and Drug Administration to see if they do the work their labels claim they will do.

centage of arsenic high enough to be a menace to health. Investigation showed that the cabbage had been dusted with arsenic only 9 days before shipment. The product was traced to the farm from which it came. Cabbage in the field was examined. Analysis showed that there was 100 times more arsenic per pound than the accepted tolerance. State authorities took control of the remainder of the crop in the field and criminal prosecution has been instituted against the shipper under the Federal act.

Practical-minded people will agree that "an ounce of prevention is worth a pound of cure." The Food and Drug Administration works on this theory, too. Take the case of the maple sirup industry. When buckets and storage tanks and evaporating pans used by the industry are painted with lead paint or soldered or mended with lead, chances are that some of the lead will be in the finished product.

Last year, long before the maple trees were tapped for their sap, the Food and Drug Administration, in cooperation with various State agencies in the maple-producing territory, carried on an intensive educational campaign warning producers of the dangers of using lead utensils and giving them constructive suggestions on how to prevent lead contamination. The campaign was followed by field work in the height of the season. Equipment and methods of processes were checked. As a consequence, there was material improvement in the industry. Improvement meant safety for consumers and no danger of loss to the producers who cooperated with the lead campaign.

For those who refused to cooperate there was the hazard of seizure of their product. One man who bought sirup from small producers, evidently pooh-poohed the educational campaign and waged a counter one of his own, advertising for the bene-

fit of the small operators of maple farms: "We pay no attention to lead ingredients, so you can use the same tools as ever." As an aftermath of this announcement, 22,987 pounds of high-lead maple sirup shipped by this agent were seized by the Food and Drug men.

The Federal Government brought 1,700 cases bearing on adulteration and misbranding of food and drugs to court this year. Of these, 1,355 dealt with foods, 345 with drugs. "Fines varied from sums as low as \$1, \$2, and \$5 to a maximum actually paid of \$1,500. Much higher fines were imposed in several cases but were remitted in large part by the courts. Three jail sentences imposed in connection with second offenses were also suspended and the defendants placed on probation."

Commenting on the court cases, Mr. Campbell, chief of the Food and Drug Administration, says: "Courts in general vouchsafed no explanation for the imposition of nominal penalties. In one instance of a \$2 penalty for the shipment of filthy and decomposed walnuts, the court indicated that it had taken into consideration the fact that the defendant had suffered a \$1,400 loss in the seizure and destruction of the shipment by the Government. In another instance, dealing with a practically worthless product offered as a treatment for serious diseases of the eye, the court imposed, without comment, a fine of \$1 and costs of \$35.

"Other courts," Mr. Campbell continues, "have indicated a growing interest in the public protection afforded by the Food and Drugs Act. In passing sentence against a spinach canner who had entered a plea of guilty to the sale of dirty canned spinach, a court remarked that if the defendant was unable to manufacture clean food he had better get out of business and stay out of that court."

Consumers will undoubtedly agree

with that decision. Dirty food and decomposed food have no place on the market. Some of the products which were seized for this type of adulteration were tomato products, frozen eggs, canned tuna fish and salmon, and cream for butter making. In the past year, the Administration and the salmon-packing industry have worked out a new method for simplifying the control of the pack and making it more effective. Due to the cream improvement campaign inaugurated in 1935, less cream was seized last year than in 1935, and the condition of the condemned cream was not as bad as it had been in preceding years.

"Nothing can be said in defense of a manufacturer who sells water to consumers at food prices," says the report. Yet in a courtroom, the

Food and Drug Administration has difficulty in proving this type of economic cheat. Water is a natural ingredient of practically all foods, but just how much water is it necessary to add to food in processing it? To date, butter is the only food for which a legal standard has been established. All butter sold in interstate trade must be 80 percent butterfat. If the fat content is deficient, chances are that the water content is high. Because of the accepted standard, it is quite easy to ascertain whether butter is adulterated with water or not. Not so with many other products, such as jams, preserves, orange beverages, frozen eggs, tomato juice, and fresh oyster shipments, all of which were seized last year for this offense. "There is a crying need," says the official report,

To see that you get your money's worth of fruit when you buy jams and jellies is one of the jobs of the Food and Drug Administration. During the year many seizures of jellies and jams were made because of the substitution of water for food or the use of too much sugar and too little fruit per glass of jelly.



"for legislative authority to set legal standards for foods under which, among other requirements, definite limits for water content can be established."

An unusual economic cheat was detected in the import of thyme and marjoram. One large foreign shipper was found to have been extracting volatile oil from these spices, then mixing 20 to 50 percent of the exhausted leaves with good leaves for shipment to this country. About 70,000 pounds of this substandard material were seized. Another manufacturer was buying coffee chaff, a waste product, and was molding it into granules resembling coffee beans which he sold to dealers to be mixed with real coffee.

Policing food and drug labels, too, is part of the work of the Food and Drug Administration. Under the present law, any statement on the container of a food or drug product must be a truthful statement. In the past year, 161 seizures of medicines for human use, representing the products of 124 shippers, were made because of false and fraudulent therapeutic claims on the labels. Nearly 900,000 gallons of imported oil, principally cod-liver oil, intended for animal feeding, were tested for their Vitamin D values. About one-third was below the Vitamin D requirement or contained less than was stated on the label. In interstate tests of certain vitamin products, 24 out of 34 samples failed to show the vitamin values claimed for them. However, the large proportion of samples found illegal does not reflect accurately the validity of vitamin claims for products on the market. Limited facilities dictated a policy of confining vitamin tests largely to those products most likely to undergo deterioration during manufacture or storage.

CONSUMERS' GUIDE



WHEN YOU BUY COAL

Tips to consumers who want to make their coal dollars count in maximum fuel values

IT'S IN THE SPRING—not winter—when the wise consumer seriously ponders the problems of coal buying. Then prices are usually at their lowest. The cold weather that bears down on the thermometer bears up on prices—sometimes lifting them a dollar above their April levels.

But bargains come to those not only prudent but lucky enough to be able to buy when low-price seasons roll around. For those who were neither last spring, a present guide to buying coal has its immediate uses. For the rest, we anticipate next April's problems.

Those dusty lumps of coal which

you feed to your furnace and your stove have a pedigree which extends millions of years beyond the first recordings of time. They are the product of the slow decay of plants which flourished in a world that even today is a mystery to scientists. In prehistoric eras there were dank swamps, overgrown with plant life, where today coal mines are burrowed deep into the earth. That plant life decayed, was gradually covered with sediment, and then, by a process that took thousands of centuries, was transformed into the material that is a basic fuel for furnaces in home and industry today. Geologically minded

consumers interested in this romance of the formation of coal should go to a natural history museum and there see lumps of coal which have retained through the ages the lacy imprints of prehistoric ferns, shrubs, and other plants which formed them.

Decayed vegetable matter in the process of forming coal first becomes peat, then lignite, then bituminous coal, and finally anthracite. Throughout the United States there is coal in each of various stages of development: Peat beds in Wisconsin and Michigan; lignite fields in North Dakota and Texas; the sub-bituminous coal beds west of the Mississippi River; bituminous coal fields in Pennsylvania, West Virginia, Ohio, Illinois, and other States; and the anthracite beds in Pennsylvania.

Coal began to be used generally for heating purposes in the latter part of the eighteenth century. Today coal is consumed at a rate which

is many millions of times faster than the rate at which coal is being manufactured by nature. Some day we may have to face the problem of the exhaustion of coal resources. Today, however, there is in America alone sufficient coal for our needs for hundreds of years to come.

Chemists tell us that coal is composed of carbon, hydrogen, and various earthy materials, but after years of study we still do not exactly know how these constituents combine to form coal. When coal is heated the hydrogen and part of the carbon are driven off in the form of gases. This part of the coal is called the *volatile matter*. The part of the carbon that remains in a solid state is called *fixed carbon*.

After coal is completely burned, the earthy material in it remains. This is the mud that was deposited with the vegetable matter in the

swamps where the coal was formed. Annoyed coal consumers call this mud the *ash*.

Consumers who fire their own furnaces know that when they shovel coal into their fires, dense smoke appears which seems to be stifling the fire. Fire then licks up between the coals and the smoke is illuminated by a bright orange flame. This smoke is unburned volatile matter from the coal. Unless the volatile matter is consumed by the flames it goes up the chimney in smoke, wasting the consumer's fuel dollar, poisoning the atmosphere of the city where he lives, and smudging the buildings in his city to a dirty, dismal gray. Ordinarily the more volatile matter coal contains the more it will give off this heavy smoke.

Heating plants may be designed to burn the volatile matter as fast as the coal gives it off, but in most cases this

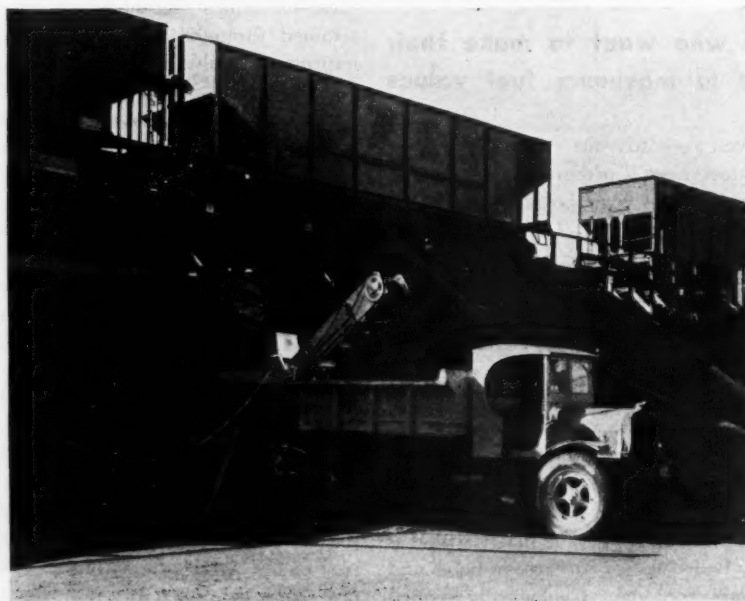
is not achieved even in plants where smoke-consuming devices are installed, and where the firing is done by a professional furnace tender. In the home it is more difficult to burn a high-volatile coal, that is coal containing a large percent of volatile matter, without smoke. Since the higher-volatile coals are the cheapest coals, it is worth learning how to use the cheapest coal which household furnaces can handle. Inventive genius has made real progress in using these cheap coals by developing automatic stokers for the house-heating furnace. The machines feed the coal gradually to the fuel bed so as to consume all the smoke before it can escape from the furnace.

Fixed carbon is the source of most of the heat in coal, consequently its most important ingredient. It does not smoke when it is burned. Coke and anthracite have most of their combustible matter in the form of fixed carbon. For this reason they are sometimes called "smokeless fuels."

Another constituent of coal, the ash, is a total loss to the consumer. It does not burn, it gives no heat, and, most annoying of all, it must be disposed of at considerable labor or expense. The ash also has another quality which makes it objectionable. It melts. When ash melts at a low temperature, as some ashes do, it forms a slaglike mass in the bottom of the fire pot which is known as *clinker*. The higher the melting or fusion temperature of the ash the less likely it is to form clinkers. Proper firing of the furnace, too, may reduce the tendency of ashes to form into clinkers.

Water is the other major constituent of coal. Relatively undeveloped forms of coal such as peat, lignite, and such bituminous coal contain more water than Eastern bituminous coal and anthracite. Water in coal reduces its worth, since the water doesn't burn and must be vaporized

Transportation costs are an important item in the price consumers pay for coal. Most of the coal consumed in cities is hauled from the mine by freight cars. Here anthracite buckwheat has been dumped into storage bins. From the bin the coal is being transferred to a truck by an automatic loader before rumbling on its way to the ultimate consumer.



before the coal will burn. Not all water found in coal is a natural part of the coal. Coal stored by dealers outdoors may absorb moisture. Sometimes unscrupulous coal dealers have been known to short weight consumers by watering coal before weighting it. Watering coal *after* weighting reduces dust and is a help to the household consumer.

Heat, of course, is what consumers really want when they buy fuel. Consequently the most important quality of fuel is its ability to give off heat. Engineers determine the amount of heat which fuel gives off by burning the fuel completely under perfect conditions and by measuring the amount of heat given off. The British thermal unit, Btu for short, is defined as the amount of heat necessary to raise the temperature of 1 pound of water 1 degree Fahrenheit.

Number of British thermal units in a particular kind of coal is not an absolute measure of its value to the consumer, however, because the British thermal unit content is determined under perfect conditions. Under the imperfect conditions that exist in the home, the heat that is actually derived from the fuel is considerably less than the potential heat contained in the fuel.

Engineers have a way of measuring the actual heating value of a coal against its British thermal unit content. They call this comparison the "utilization efficiency" of the coal. If a particular fuel has a British thermal unit content of 100 and if only 75 of these British thermal units are actually obtained from the fuel when it is burned in the furnace, the ratio is 75 to 100 or 75 percent. This 75 percent is the "utilization efficiency" of the fuel. This efficiency varies considerably with the heating plant, the fuel, and the fireman.

Here's how the "dollar efficiency" of a particular fuel is determined: Suppose a certain fuel costing \$10 a

ton contains 20 million British thermal units. The cost of each million British thermal units is \$0.50. If in actual practice the purchaser of this coal is able to get only 10 million British thermal units for every 20 million in the ton—its "utilization efficiency," that is, is only 50 percent—then the cost per delivered million British thermal units becomes \$1.

Price per ton of coal, then, is not the cost of heat. When a household consumer buys coal, the dealer should be able to say how many British thermal units it contains; and to

Byproducts of many agencies of Government in Washington are services that help consumers in their buying problems. Only one agency has been created by Congress with the name "consumer" in its title and with the single duty to represent consumer interests before officials charged with the control of prices of a consumer product. This is the office of Consumers' Counsel of the National Bituminous Coal Commission. In our next issue we will sketch the work of this unique Government office.

figure very accurate heating costs, the consumer needs to know the efficiency with which the coal is being burned and the heat transmitted to the house.

Large companies purchase coal by specification; heating engineers write the specifications and chemists analyze the delivered coal to see if it conforms to them. But this is an expensive procedure, so costly that the Federal Government uses it only for purchases of coal in lots of more than 300 tons.

Consumers buying coal will find the use of specifications and chemical analyses too expensive unless they are members of cooperatives like one in Cleveland which guarantees the quality of the coal it sells to its co-

operators. Other consumers must ask their dealers to certify to the qualities of the coal they sell and depend upon their reliability for accurate descriptions.

Anthracite, or hard coal, rates high as a clean source of heat. It is free-burning; that is, the pieces of coal do not swell, soften, or cake together when it is burned. It is delivered to consumers screened and graded according to size, and it has very little coal dust. It burns with a blue flame without smoke. Anthracite has a high fixed carbon content—usually more than 92 percent—and a low percentage of volatile matter. It burns more evenly for longer periods than other coals and consequently requires less attention from the householder. Against these advantages, anthracite usually comes at a higher price per ton than other coals.

One pound of anthracite contains 12,500 British thermal units. The average pound of anthracite in the average home furnace can be burned at an "efficiency" of 60 percent. At a cost of \$13.50 per ton, the anthracite user pays 90 cents for each million delivered British thermal units. This cost, of course, is only a general guide to consumers, for various types of anthracite coal will contain more or less heat units than this and will cost more or less than \$13.50 per ton, depending upon the consumers' nearness to the anthracite fields.

Anthracite is usually sold in seven sizes. From big to little they are: Egg, stove, chestnut, pea, buckwheat, rice, and barley. As the size of anthracite diminishes, the ash content increases, and the British thermal unit content decreases. However, price also decreases with size. Consumers must determine for themselves the real heat cost of the different sizes.

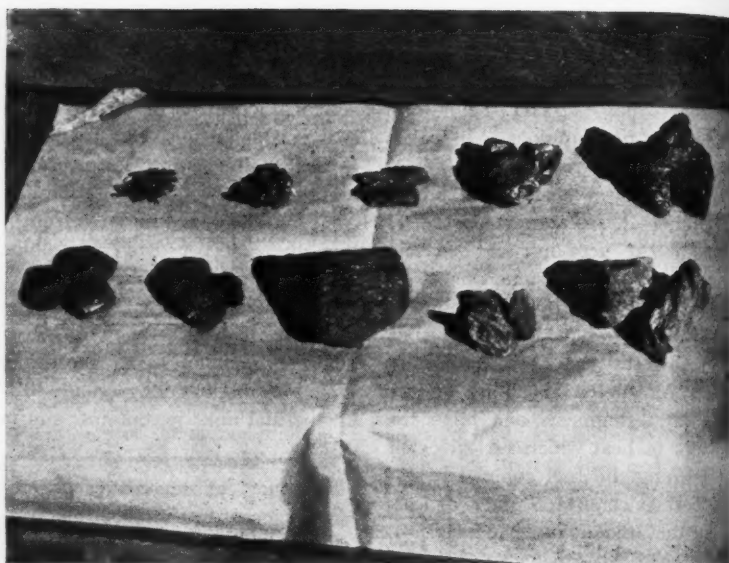
Semi-anthracite coal is not quite as hard as anthracite. It, too, is delivered screened, but it contains more

dust than anthracite. Its fixed carbon content is usually from 86 to 92 percent. Since it has more volatile matter in it, it burns first with a yellow flame, which afterward changes to blue. Semi-anthracite burns more readily and more rapidly than anthracite. Bituminous coal is a soft coal containing a high percentage of volatile matter. For this reason it burns with considerable smoke and a yellow flame. Ash content of soft coals varies from very low to very high, depending upon the particular region from which the coal comes.

Three general types of bituminous coal are included in this group: low- and medium-volatile bituminous; high-volatile bituminous; and sub-bituminous. Low-volatile bituminous is the highest in fixed carbon content and the lowest in volatile-matter content. It does not smoke very much and is usually sold as a semi-smokeless fuel. The fixed carbon content of bituminous coals varies from about 45 percent for the sub-bituminous varieties to more than 78 percent and less than 86 percent for the low-volatile bituminous varieties. These figures are on a dry-mineral-matter-free basis. The British thermal unit content varies from 9,000 to 15,000.

Pocahontas coal is one variety of low-volatile bituminous coal. The best of this coal, at a cost of, say, \$9 a ton, has a British thermal unit content of 14,800; it can be burned with an efficiency of about 55 percent or more. This delivered cost for each million British thermal units is about 55 cents.

High-volatile bituminous coal at \$7 a ton, with a British thermal unit content of 13,200 and a combustion efficiency of 52 percent, costs 51 cents per delivered million British thermal units. This coal is sold under various names: High Volatile Fairmount, Dorothy Splint, High Volatile Kentucky, Hocking Valley No.6, Cambridge No.7, Eastern No.8.



Each size of coal has a specific advantage for various types of stoves and furnaces. Top row (l. to r.), anthracite: Buckwheat, pea, nut, stove, and egg. Below, bituminous: Briquets, stove, and egg; coke: Nut and egg.

A great variety of bituminous coals are on the market with many differences in British thermal unit content, ash content, and fixed carbon content. Consumers may obtain more exact descriptions of the particular coal they buy by writing to the United States Bureau of Mines for the analysis of coals by States.

Bituminous coal users often complain of expensive dust. To avoid this dust, the coal may be watered or oil-treated before it is brought into the house. It is a good idea, to, to purchase bituminous coal in as large quantities as is possible, for the less frequently the coal is delivered into the home the less dust will result.

Bituminous coal comes in these sizes: lump, egg, stove, nut, pea, stoker, and slack. Egg and stove types are used most often by domestic consumers, while the stoker size is recommended for use with "automatic fireman."

Coke is coal which has been heated in huge ovens until all the volatile matter has been driven off. The

gases when driven off are burned for fuel in steel furnaces and other manufacturing plants. Many valuable coal-tar products, such as saccharin (which is sometimes substituted for sugar), dyes, and medicines are manufactured from the liquid byproducts of coal carbonization.

Coal heated in this manner is transformed into dull black, porous lumps. These lumps, the coke, are high in fixed carbon content and contain practically no volatile matter. Because the volatile matter is almost completely driven off, coke burns with no smoke. The coking treatment does not effect the ash content of the coal. Coke therefore contains a high percent of ash which reduces slightly its value as fuel.

Loss of the volatile matter makes coke a fuel which burns less readily than coal. Consumers who change from coal to coke often find that their furnaces have a tendency to go out easily. Careful firing, however, will overcome this difficulty. Other difficulties attached to the use of

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Hot coals should be pushed to the back or to one side when feeding fresh fuel to the furnace. At the left, an amateur stoker carefully deposits the coal in the center pocket of the fuel bed. At the right he is cleaning out waste ash to insure free ventilation and draft for the burning coal.

coke are: its bulkiness, which necessitates larger furnaces and greater storing space; and its large ash content which results in the formation of clinkers. Against these disadvantages there may be set its relative smokelessness and its greater heating efficiency. In cost, it scores low. At \$8.50 per ton, for instance, a grade of coke containing 13,200 British thermal units burned with an efficiency of 60 percent, costs consumers only 55 cents per million delivered British thermal units.

Coke from coal comes in four standard sizes: lump, egg, nut, and pea. The egg size has been found preferable for the ordinary-sized stove and furnace.

So much for quality in coal.

Next important buying tip is to check on how much coal you get in a ton. There are two kinds of tons, the long and the short. One

weighs 2,240 pounds, the other 2,000 pounds. Many cities prescribe which ton shall be used in the sale of coal. Consumers are probably best served when the unit prescribed by law is the 2,000-pound or short ton. Whatever the local law in the case may be, it's a wise consumer who knows it and keeps an eye on its observance.

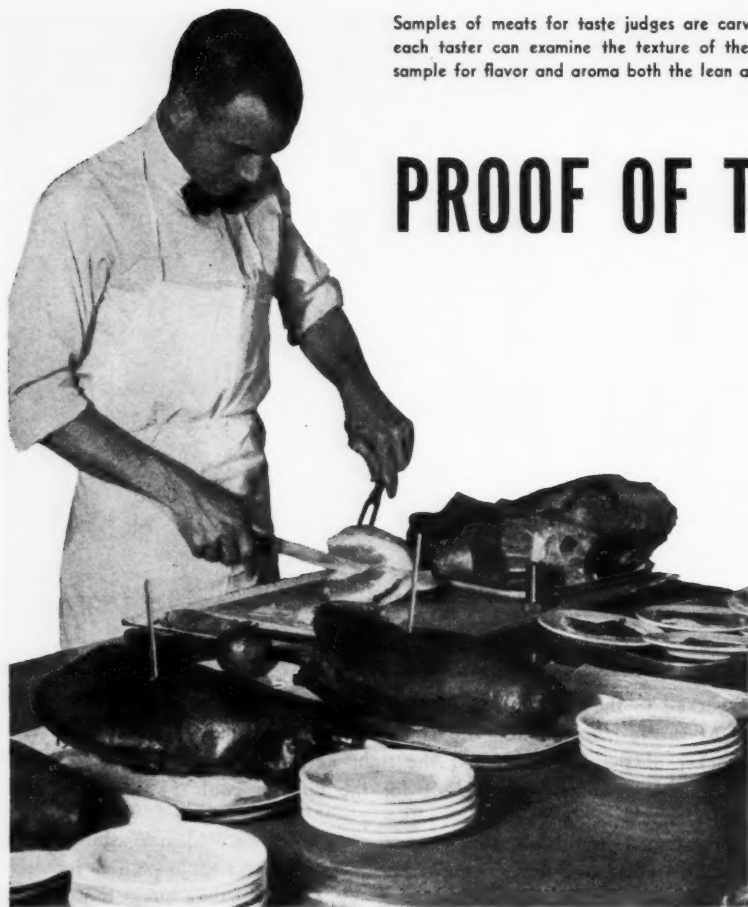
In Washington, D. C., the law requires that coal be sold by the long ton. In 1933 some coal companies met and agreed among themselves to reduce the price of coal per ton, but to change from the long to the short ton. The cut in price was not great enough to counterbalance the cut in weight. In fact, coal dealers, by this device, were able to make a profit of half a million dollars in 1 year. The superintendent of weights and measures in Washington then stepped into the picture. As a result,

consumers of coal in Washington today get a full 2,240 pounds required by law when they buy a ton of coal.

Protection for the consumer who wants to be sure that he is getting every pound that he pays for, and for the honest dealer who gives full measure, must come from local weights and measures laws and enforcement. In some cities officials are authorized periodically to check dealers to see that they deliver a full ton to consumer coal bins. The National Conference of Weights and Measures Officials has drawn up a model law as a standard for local and State legislation. Under this model law, coal dealers would fill out duplicate weighbills, showing how many tons of 2,000 pounds are in the sale; one weighbill goes to the consumer, the other is held by the dealer so that at any time a

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Samples of meats for taste judges are carved so that each taster can examine the texture of the meat and sample for flavor and aroma both the lean and the fat.



PROOF OF THE PUDDING

Science may measure to a fineness the nutrients in food; when it comes to appetite appeal, it's taste that counts. The Bureau of Home Economics tells here in word and picture how it makes taste tests.

FINAL test of food quality, to most people, is: How does it taste? Meat, cake, bread, jelly, potatoes—all food that's eaten must undergo this examination. And every cook knows that this taste test is a critical one where it's performance that counts.

In addition to being a good source of this vitamin, or that mineral, or being especially valuable for some other reason, a satisfactory food must have good eating quality. It should have a pleasing aroma and a desirable flavor. These characteristics can be judged only by human beings.

Part of every experiment on food quality carried out by the Bureau of Home Economics is for this reason

a taste test. Competent judges actually taste the food and record their opinions concerning it on standard score cards.

These judges are ordinary people—secretaries, executives, laboratory workers—of the Department, both men and women. Taste-testing is only a sideline to them. They do their regular work each day and are called in on occasion to sit in judgment on foods. But they are discriminating, chosen for their ability to show consistently good taste judgment.

A good judge must have enough experience to recognize different qualities of foods when he tastes them. He should have an analytical mind so that he can translate his

opinions into the words of the standardized score sheet. His taste standards must be high. He should be able to duplicate himself—that is, be consistent in his choices from day to day.

Personnel of a taste jury varies with the aim of the experiment. If the aim is to find the better of two methods of making jelly, then judges are persons acquainted with standards of jelly excellence. But the aim may be to determine preferences of consumers for certain types of food where there is no recognized standard of excellence. Then a representative group of consumers with no specialized food knowledge can be used.

Technique of preparing food to be taste-tested varies somewhat. But in

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all cases the judge does not know the differences in the samples. If the food is ordinarily served hot, or if it must be cooked to develop aroma and taste, the samples are judged while they are hot. And the judging takes place at a time when the tasters are neither too hungry, nor when they have just finished a meal.

Typical taste-testers are the meat judges. For the past 11 years the Bureau of Home Economics has cooperated with Federal and State experiment stations to find how production factors affect the eating quality of lamb, pork, and beef. That is, they want to find how breed, feed, age, sex, and method of handling these animals affect the flavor, the tenderness, and the general palatability of their meat. And when they find what kinds of meat have the highest eating quality they can trace backwards through their experimental data to find just how they produced the hog that gave the pork that the judges rated best.

To determine the palatability of the meat is the final chapter in each of these experiments. A standard cut from each animal is cooked. Pork loin, ham, beef rib roast, leg of lamb are four of the standard experimental cuts. These come from corresponding sides of each animal. Throughout an experiment these cuts are cooked to the same stage of doneness. The cook determines this

exactly by a thermometer placed in the meat.

Usually meat judging takes place about 3 o'clock in the afternoon. The trained judges meet around a table. Ordinarily there are from three to five of them. In front of each judge is a glass of water, a plate, a fork and paring knife, and a tart apple. As each slice of unseasoned meat is put before him, he taste-tests it and records his opinions on a standard score card.

Let's look in on a session of the pork taste-testers. This time there are four judges assembled. In comes a girl with the first samples—four small pieces of pork from the first roast. She sets a plate in front of each judge. The judge lifts the piece so that he can smell the aroma while the pork is hot. He records his opinion. And he judges both how strong the flavor is and whether or not he likes it.

Next he notes the texture—how fine the grain is. Then he eats a bit of the fat. He tastes this for intensity and desirability. He does the same for the lean. He records his opinion of the tenderness of the meat. He notes how much juice there is and how rich that juice tastes to him. Then he marks the color of the lean and of the fat.

Carefully he looks over the score card and signs his name. All is done for one sample. The judge takes a

sip of water and eats a slice of tart apple. The taste of the last sample is gone and he's ready for sample No. 2.

Meanwhile, out in the kitchen the roasts are emerging from the oven at intervals of about 10 minutes. This allows time for the judges to taste each one and for carving and doing the statistical work that needs to be done in the kitchen.

Since the opinions of all the judges are recorded on standard score sheets, it is possible to compare and correlate the results. Then these results may be sent back to the producer. Thus he finds what the consumer will probably like. Since he knows the whole history of the production of the animal, he can duplicate it for meats that should sell well on the market.

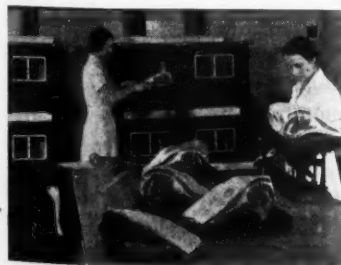
In the bread flavor tests being carried on now, the 14 selected judges never have more than three samples to taste at once. At 11 o'clock, several mornings a week, each judge gets a paper sack. In this sack are the three samples. He smells them, tastes them, and records his preferences on a score card. The samples are varied in many significant ways. One day the breads are mixed by three different methods. The next variable may be the class of wheat used in each. Each different factor is judged at least twice. When the

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Each cut of meat used for taste tests is cooked in exactly the same way and to the same stage of doneness. A thermometer in each roast tells when that stage is reached.

The case history of each cut is known by scientists conducting the experiment. Their purpose is to find out how certain production factors affect eating quality of the meat.

There's little time for conviviality for a tasting jury. Each judge is kept busy tasting and smelling and writing his opinions down on his standardized score card.



NOVEMBER 29, 1937



It's good fun to eat apples, but small boys should be cautioned about unripe ones. Green fruit is not poisonous but it is digested more slowly than ripe fruit.

DEATH TO FOOD FALLACIES

WHEN the president of a State teachers college only a few years back asked the parents and teachers of elementary school pupils in 14 States if they believed that eating fish improved the brain, 59 out of each 100 in the general population and 32 out of each 100 teachers answered "yes."

This is the age of science, we like to think, until suddenly we come across such evidences that superstition crushed to earth seems to rise again.

Lots of us are credulous when it comes to what we eat or don't eat. We worry a good deal about being sick, and think maybe some miracle of diet can cure all our real or fancied ailments. The science of nutrition, while advanced, is still fairly new. Its great strides have been in the last two generations. The facts it has unfolded lend an air of credibility to extravagant claims made for some diet plans or food or "nutritive" preparations, in what sounds like the language of science.

Sometimes a little basis of fact is enough to give plausibility and pop-

ularity to a myth. For example, science has established that there is phosphorus in the brain and phosphorus in fish. From that it is an easy, though illogical, transition to "fish is brain food."

Belief in this sort of logic may throw a family's diet way off. At best, it may waste money; at worst, it can cause people to go without necessary elements in the diet, the lack of which may keep a person below "par" or result in actual illness.

So it is worth taking a few of the food legends still in the air and bringing them to earth. Without further ado, then, let us consider some typical bits of what a great biologist has called "pseudodietetic inspiration":

"It Is Dangerous to Eat Milk and Fish at the Same Meal"

AS LONG as the foods themselves—the milk or ice cream, the fish or oysters—are fresh and in good condition, you run no risk in combining them at the same meal. Fish chowders and oyster stews *with milk* are

Some can be costly in money; others costly in health. Here are a few false, foolish, or half-true ideas about nutrition to unload from your pack of prejudices

among New England's proudest gifts to the American culinary heritage. Fish baked in milk is the basis of some excellent recipes, too.

Any foods which may safely be eaten separately may safely be eaten together, flatly declares one of the greatest nutrition authorities.

"Use of Aluminum Pans Will Give You Cancer"

HUNDREDS of hospital kitchens are equipped with aluminum vessels. If aluminum in foods were poisonous and a cause of cancer, most of us would be in a bad way. An aluminum-free diet is almost impossible to prepare. The earth's crust contains about 8 percent aluminum. Anyway, experiment has shown that the body rids itself of 99.9 percent of the aluminum it takes in with its

CONSUMERS' GUIDE



"For Heavy Physical Work, You Require Lots of Meat"

ENERGY for physical labor can come from almost any food. The most economical sources of energy are foods rich in carbohydrates (sugars and starches), such as bread, cereals, sugars, certain vegetables, and fruits. They form the largest part of our diet, ordinarily. Fats furnish a good deal of energy, too. Meat gives us chiefly proteins. Proteins are essential for rebuilding tissues of the body as daily wear and tear destroy them. We cannot get along without proteins, but they are an expensive source of energy.



food. Traces of aluminum do not harm the body. Tomatoes may brighten or spinach darken your aluminum pans, but you don't need to worry about its doing anything damaging to your health.

"Don't Drink Water With Your Meals"

IF YOU like water with your meals, drink it. In reasonable amounts it stimulates the digestive juices and facilitates digestion. Fear of water has been based on the apparently logical argument that "water dilutes the enzymes" which must be present for digestion. But the enzymes are present in the same quantity, regardless of dilution by a reasonable amount of water.

Drinking a lot of water just before meals is not so good. Filling the stomach with water leaves little room or appetite for the meal to come.

Some people fear iced water. To the normally functioning stomach it presents no threat. Twenty minutes after drinking iced water the stomach's temperature is again the same as that of the rest of the body. This is the same time it takes to return to body temperature after drinking a cup of hot coffee or other beverage.

To use protein for energy, the body has to break part of it down into carbohydrate, depriving it of its nitrogen content, and burn it in the form of carbohydrate. One of America's nutrition experts compares that process to making a fire with boards full of nails. "The board would burn like any others, but the nails would add nothing to the fire."

Studying the college crew in action, two Yale scientists concluded that an athlete depends greatly on carbohydrates for body fuel when under special pressure. A good carbohydrate intake seems to better his wind and increase his endurance. "Sugar is the best quick fuel for intense exertion," they report.

For the long-time pull, of course, athletes—like the rest of us—require a well-balanced diet.

Two generations ago scientists gave up the theory that muscle work demanded an extra supply of proteins—and hence of meats. Like many another exploded idea in the realm of food, the old theory lingers on.

"Children Need More Heat-Producing Foods for Cold Days"

"HEAAT-PRODUCING" or "energy" foods are usually about the last thing a mother need worry about in planning the family menu, even for winter days. The average child who does not go hungry gets enough of the starches, sugars, and fats to keep him in calories and warmth. Nowadays, too, schools and homes are better and more evenly heated than ever before.

Every recent study of the Nation's diet shows that we are best off as to energy foods, worst off as to protective foods. "So, if you are interested in providing meals for the family's best health, concentrate on the protective foods first," say the Bureau of Home Economics experts.



"In other words, build a foundation of milk, eggs, green and yellow vegetables, tomatoes or citrus fruits, and so on, and then fill in with the

starches, sugars, and fats"—that is, with foods high in these constituents.

Of course, it is expensive for low-income families to balance their diets with enough of the protective foods. But many foods, the home economists point out, fit into both classes. Certain foods you think of first as "starchy" or sweet—energy foods—may also contain some minerals and vitamins. Whole-grain cereals and potatoes, molasses and sorgho and cane sirups, are examples of such "many-value foods," which include some of the protective substances you need during cold weather and all the year round.

"Rich Foods Are Indigestible"

"RICH FOODS" we generally call those which are high in fat and sugar content. Digestibility—or indigestibility—is a question of the completeness of assimilation. From that standpoint, fats and sugars are very digestible. Bureau of Home Economics experiments showed that between 95 and 98 percent of fats (vegetable fats, butter, cream, lard, etc.) were digested.

Ease of digestibility—as distinguished from completeness of the process—is another matter. Fats remain longer in the digestive tract, slow up the process of digestion. Moreover, rich foods are usually compact, concentrated foods and take longer to digest for that reason. To the average healthy person this is not a matter of concern.

Difficulty comes with rich foods when (with a low proportion of other essentials) they add calories where calories are not needed. The important thing is not to get too much of the rich foods and to get the right quantities of other foods in the diet along with the sugars and fats.

"You Can Eat Vitamins Through Your Skin"

VITAMIN D is the "antirachitic" vitamin. It helps the body to

make effective use of phosphorus and calcium in the diet in building bones and teeth. Headliners in the small child's diet are the foods rich in this ricket-preventing vitamin. Because sunshine produces Vitamin D by acting on a substance called a "precursor of Vitamin D" (formerly thought to be ergosterol) in the human skin, a cardinal rule of baby care is plenty of direct sunlight. As an extra precaution against too little sunshine and diets not sufficiently rich in this essential vitamin, many doctors prescribe for babies up to 2 years additions to the diet of such things as cod-liver and other fish oils and concentrates of known potency. For older children, too, they sometimes recommend such diet additions during winter months when it is difficult to get direct exposure to sun.

How much of this vitamin is needed by grown-ups remains a question. Experts are inclined to think that the usual exposure to sunshine and a well-balanced diet (including adequate amounts of eggs, milk, butter, and certain fish such as salmon and sardines) will take care of the ordinary adult requirements for Vitamin D.

Even if adults could utilize effectively extra doses of Vitamin D, the experts look with the gravest suspicion on the skin route for its intake. "There is evidence," remarks the Journal of the American Medical Association, "that irradiated ergosterol may be absorbed through the skin of rats. This evidence has been an excuse for adding vitamins to various cosmetic preparations."

"The skin is an organ for excreting, rather than absorbing, substances," points out the chief of the Food and Drug Administration's Vitamin Division. "This is not to say that the condition of the skin cannot be helped by external applications of various kinds, but rather that actual nourishment reaches the skin through the circulatory system. The

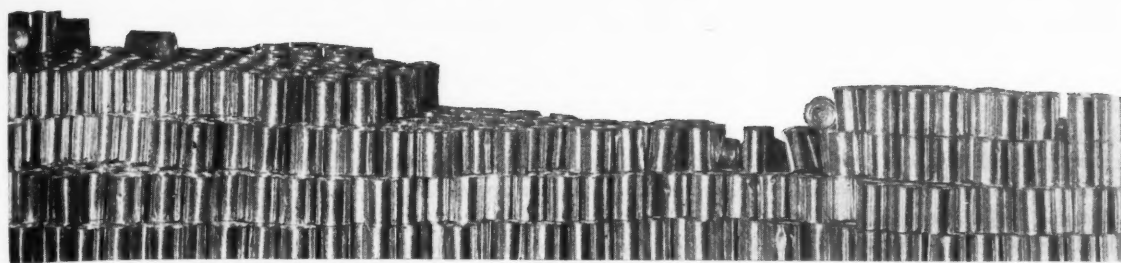
amounts of Vitamin D which could be rubbed or washed in through the skin to remedy a diagnosed deficiency would, according to available data, not be significant."

As to whether Vitamin D might be of benefit to the skin itself, the director of the Toilet Goods Association board of standards says: "The dermatologists I have consulted, men of prominence in their field, are unanimous in their statements that no satisfactorily controlled experiment work has been done which would show any value of Vitamin D to the skin."

At one time announcement was made of a "Vitamin F" held necessary for skin health. Such a designation has no standing among scientists. Science has apparently established that rats need certain unsaturated fatty acids, but the experts claim that there is no substantial evidence that human beings need these fatty acids. If they do, the scientists say, they can get all they need from a few cents' worth of salad oil.

Again, experts seem to hold that there is no need for application of Vitamin A to the skin; that if Vitamin A were to enter the body through the skin, it would probably have to be through skin lesions. "We know of no adequately controlled experimental work," states the director of the board of standards of the Toilet Goods Association, "which will show that these factors (Vitamin A and its precursor, carotene) can be absorbed through the skin intact or exercise their benefits by external application."

Foods—natural or prepared—rich in the needed vitamin, rather than external preparations, would again appear to be the efficient and economical way to remedy a deficiency condition. Fish-liver oils, milk, butter, eggs, cheese, and green vegetables are some of the foods that will give you Vitamin A.



MARKET NEWS FOR QUANTITY BUYERS OF *Canned Vegetables*

CAN openers probably will do more than their usual share of work in 1937 and 1938 if consumers take advantage of the record supplies of canned vegetables which are moving on to retailers' shelves at prices averaging from 20 to 25 percent less than during the past season. Consumers who were forced in the season just ended to curtail purchases of canned vegetables because drought boosted prices can get their innings now from the bountiful supplies. Unless demand for the big pack steps up considerably, the end of the canned foods season next summer may see big surpluses carried over to the 1938-39 season. Due to large supplies, wholesale prices probably will remain close to their present level until some indications of the size of the 1938 pack are available next summer.

Total canned vegetable supplies this season are expected to be the largest on record and from 15 to 20 percent in excess of a year ago. Record packs of sweet corn, lima beans, snap beans, and beets are in prospect. Substantial increases over a year ago are reported for all other vegetables except tomatoes and asparagus. These estimates do not include frozen vegetables which still constitute a very small part of the total pack of processed vegetables. Volume of quick-frozen vegetables,

particularly peas and lima beans, is expected to be larger than a year ago.

Quantity purchasers of canned vegetables will find Government reports on acreage and production for manufacture, as well as trade reports on stocks and prices, helpful in determining when to buy their supplies. Government reports on acreage are issued in April, while production reports appear from June through October. When smaller supplies are in prospect, it generally is advisable to contract before the pack is under way in order to purchase goods at the old low price level. When larger supplies are expected, the best policy is to wait until prices are adjusted to a lower level.

Sweet corn looms as the largest single item in this year's pack. Peas and tomatoes follow closely after. Generally tomatoes rank first, with peas and sweet corn next in order. The sharp reduction in yields resulting from unfavorable growing conditions in August and September caused tomatoes to topple from the head of the list. Last year tomatoes were the only canned vegetable to escape serious drought damage.

Sweet corn pack is the largest on record and is about three-quarters larger than a year ago. Wholesale price of No. 2 size standard white whole-grain corn in November was 20 cents a dozen below a year ago.

Record canned green pea supplies also are in prospect this season, and prices have dropped to low levels. Total supplies probably will be one-quarter larger than in 1936-37 and substantially above the supplies handled by canners in past years. This will tend to keep prices close to their present level during the remainder of the current season. In early November No. 2 size cans of standard Alaska peas were wholesaling at 23 cents a dozen below a year ago.

Canned tomato supplies most likely will be about the same as in 1936, but slight increases are expected in supplies of tomato juice, tomato pulp, and other tomato products. Wholesale prices probably will remain at their relatively low 1936 level. Tomatoes are the only major canning crop not to show a sharp increase in supply over 1936. The size of this year's pack was reduced by intense heat and excessive rain late in the growing season.

Record snap-bean pack has pushed down wholesale prices from the relatively high level reached last season to lower levels. Total supplies are expected to be about one-third larger than last season and considerably above average despite a small carry-over. Wholesale prices this season probably will not change much from present levels. In early November the wholesale price of No. 2 cans of

standard cut green beans was 20 cents a dozen lower than a year ago.

Current pack of beets, lima beans, and kraut likewise are expected to be larger than a year ago. But the asparagus pack is about one-eighth smaller than in 1936 and prices have advanced to higher levels. Complete records of the pack of minor crops are not now available. However, it appears that production of lima beans for canning will be one-quarter larger than in 1936, while this year's record beet production most likely will be a third above a year ago. Some downward revision of the indicated one-sixth increase in kraut production over 1936 may be necessary because of weather damage to the crop.

CONSUMERS' QUERIES AND COMMENTS

[Concluded from page 2]

shoes among the photographs used with this article was not a calculated oversight. I am sure you will realize that we do not have limitless resources which we can use in obtaining photographs. We obtained the best pictures available to illustrate the important facts covered in the text on types of leathers, construction, and fit of shoes. Were we not operating under limitations in resources and space, there are many other photographs, including some on kid shoes, which we would like to run.

"Your next point refers to suede. You state: 'The paragraph stating that most suede footwear is made of calf, ignoring completely the fact that millions of feet of kid suede is sold each season to shoe manufacturers. . . .' The paragraph you refer to reads: 'Most of our suede footwear is made of calf finished on the flesh side, but *suede shoes may be made of many different leathers.*

. . .' Sources of our statement are these:

"AMERICAN LEATHERS, by American Leather Producers, Inc., p. 53. 'Calf suede is by far the most important suede leather used in shoes. . . . So for practical purposes "suede shoes" mean calf shoes.'

"SHOE AND LEATHER LEXICON, 9th Revised Edition, published by the Boot and Shoe Recorder Publishing Co., p. 69. 'Suede—Method of finishing leather, or the leather itself . . . now almost universally made from calfskin.'

"You state, next, that 'the statement that genuine kid leather is not used for shoes is absolutely incorrect, as millions of kidskins are used by the various tanners.' The text of the article reads this way: 'Genuine kid leather is not used for shoes. Kid shoes . . . are really made from the skins of goats.' These two sentences were intended to be read together. (A semicolon, instead of a period, between them would perhaps have made this clear.) Our authorities for these statements are:

"HIDES AND SKINS, by John R. Arnold, p. 425. 'The name kid is a mere survival which deceives only the layman. True kidskins are not obtainable in quantities large enough for economical operation of an industry using the chrome process. . . . In the United States the consumption of true kidskins is now, as it has always been, negligible.'

"SHOE AND LEATHER LEXICON, 9th Revised Edition, published by the Boot and Shoe Recorder Publishing Co., p. 36. 'Kid—Shoe leather made from the skins of *mature goats*. The skin of the young goat or "kid" is made into the thin, flexible leather used in the making of kid gloves, being too delicate for use in shoes.'

"THE SHOE INDUSTRY, by Frederick J. Allen, p. 90. 'Kid is the name for leather made from skins of full-grown goats, coming mainly

from the mountains of India, Europe, and South America.'

"Our references to kid shoes were meant to convey the idea, supported by the authorities quoted above, that the skins of mature, rather than immature, goats are used in making the shoes which are sold as 'kid.' If this is not correct, I would appreciate your telling me where I can find well-supported data on the number of shoes marketed today which are made from the skins of kids, or immature goats. I have been unable to locate any such data myself, nor have any of the standard reference books thrown any light on the subject.

"The confusion that has apparently arisen in your mind as to our meaning in writing of 'genuine kid leather' prompts me to ask you if there has been any definition of 'kid,' as referring to 'kid shoes' and 'kid gloves' which has been worked out between interested industries and representative consumer organizations. I believe that many consumers are under the impression that 'kid' means the skin from immature goats. In your opinion, do you believe it would be helpful to consumers directly, and to your industry indirectly, if some mutually understandable definitions were arrived at through conference between your Guild and bona fide consumer organizations? You have perhaps been following the efforts of such trade associations as the National Retail Dry Goods Association in working out definitions of terms used in describing textile products. The wool industry has also taken steps toward clarification of descriptive terms in the trade practice agreement it has worked out with the Federal Trade Commission. I should be glad to know what you think might be done by the Kidskin Guild to clarify in consumer minds what the trade means when it speaks of 'kid shoes' and 'kid gloves.'"

CONSUMERS' GUIDE

WHEN YOU BUY COAL

[Concluded from page 11]

weights and measures official can check back on it if necessary. Careful consumers know their local law and show a healthy curiosity about its enforcement.

Economy in heat comes not only from buying the economical kind of coal and knowing you are getting all the coal you are paying for. Choosing the size to fit the fire pot in the furnace is important, too. Egg coal ordinarily should not be used in fire pots which are less than 24 inches wide and 15 inches deep. Stove coal takes a fire pot that is at least 16 inches wide and 12 inches deep. Chestnut coal may be burned in fire pots that are 20 inches wide and 10 inches deep. The smaller sizes require small measure grates and special drafts. These sizes are used, however, with automatic stokers, and in some cases the savings resulting from the use of smaller coal sizes may make the installation of an automatic stoker economical.

Keeping costs down depends, too, on the furnace and the fireman. Coal burned in a properly tended furnace will be more efficient than coal burned carelessly. Coal burned in a furnace in good repair will be more efficient than coal burned in a furnace that is in disrepair.

Proper firing of the furnace is important in obtaining full fuel value for the fuel dollar. For full information about firing, consumers should write to the Superintendent of Documents, Washington, D. C., for the Bureau of Mines' publication, "Questions and Answers for the Home Fireman." Enclose 5 cents in coin. Generally, one rule is to use uniformly sized coal. Another is to maintain a uniform fuel bed without holes and adjust dampers to maintain an even flow of heat. Most common mistake of home firemen is to burn their furnaces furiously for

a short time, then shut them off.

Most fire builders, too, build fires first with a layer of paper, then a layer of kindling, and finally a layer of coal. The better way is to reverse this process. Starting with the coal, then putting on the kindling and the paper on top of the coal results in less smoke and more complete burning of the gases given off. In adding coals to a going fire, instead of shoveling the coal directly on the fire, home firemen should first push the hot coals to the back or to one side of the furnace, thus creating a pocket down to the grate where the fresh coal is shoveled. This, too, reduces the loss in heat up the chimney.

PROOF OF THE PUDDING

[Concluded from page 13]

final results of this experiment are correlated they will go to bread producers who may profit by it.

The Bureau has conducted a number of other taste tests. In one they fried potato chips in different types of fats to find the ones best adapted for deep-fat frying. In another they tried the different kinds of fats in biscuits to test the effect on flavor. From year to year tests are made of soybean varieties,

potato varieties, and of the various production factors that influence the table quality of potatoes.

In all these cases the value of the taste test lies in the fact that it enables the producer to estimate how consumers will react to his product. And he can look to the experimental data to find how to meet their preferences.

STUDY QUESTIONS FOR THIS ISSUE

1. What were 3 of the activities engaging Food and Drug officials last year?
2. What is coal composed of?
3. What is the smoke that comes from the burning of coal?
4. What is the source of most of the heat from coal?
5. What is a "smokeless fuel"?
6. Why does the price per ton of coal not necessarily represent the cost of the heat obtained from the ton?
7. What are the relative advantages and disadvantages of hard and soft coal for home use?
8. How does coke differ from coal?
9. Does your local weights and measures law define the number of pounds in the ton of coal sold in your community?
10. What are 3 economy rules for home firemen?

OUR POINT OF VIEW

The CONSUMERS' GUIDE believes that consumption is the end and purpose of production

To that end the CONSUMERS' GUIDE emphasizes the consumer's right to full and correct information on prices, quality of commodities, and on costs and efficiency of distribution. It aims to aid consumers in making wise and economical purchases by reporting changes in prices and costs of food and farm commodities. It relates these changes to developments in the agricultural and general programs of national recovery. It reports on cooperative efforts which are being made by individuals and groups of consumers to obtain the greatest possible value for their expenditures.

While the CONSUMERS' GUIDE makes public official data of the Departments of Agriculture, Labor, and Commerce, the point of view expressed in its pages does not necessarily reflect official policy but is a presentation of governmental and nongovernmental measures looking toward the advancement of consumers' interests.

In This Issue

Page

On Guard for Consumers 3

Headline news from the 1937 report of the chief of the Food and Drug Administration.

When You Buy Coal 7

Tips to consumers who want to make their coal dollars count in maximum fuel values.

Proof of the Pudding 12

Science may measure to a fineness the nutrients in food; experts in the externals of food may rate its eye appeal; but when it comes to appetite appeal, it's taste that counts. The Bureau of Home Economics tells here in word and picture how it makes taste tests.

Death to Food Fallacies 14

Some can be costly in money; others costly in health. Here are a few false, foolish, or half-true ideas about nutrition to unload from your pack of prejudices.

Market News for Quantity Buyers of Canned Vegetables 17

Study Questions 19

